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10/072,961	02/12/2002	Yoshiaki Moriyama	Q68491	2264

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EXAMINER	
PATEL, SHEFALI D	
ART UNIT	**PAPER NUMBER**
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/072,961	MORIYAMA, YOSHIAKI	
	Examiner	Art Unit	
	Shefali D. Patel	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23 and 25-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23, 25-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment was received on July 27, 2007.

Response to Arguments

2. Applicant's arguments filed on July 27, 2007 (Remarks on pages 10-15) have been fully considered but they are not persuasive.

Applicants argue on page 12 stating:

> "In Schwab, however, a field is one of many still images which comprise a moving picture, but not a substantive or meaningful part of digital data. In Schwab, one line is a line of one field i.e., one still image (many of which form a moving picture). In other words, in Schwab, one field is not unified part, such as one movie, one music tune, etc because one movie comprises a plurality of still images, each of the still images having a respective field. That is, line 227 is not a timing before an end timing of contents which are a substantive or meaningful part of digital data but simply a line in a field forming one still image. In short, Schwab cannot and does not detect a timing where one movie switches to the next movie. Schwab fails to disclose or suggest determining a timing before switch, start, or end of substantive or meaningful part of the digital data."

The examiner disagrees.

First of all what is argued does not appear directly in the claim language (at least the independent claims). Where is this limitation exactly located? Which claim? The limitation of "determining a timing before an end...setting an end timing..." as it appears in claim 1 for example is much broader than what is being argued. As far as the limitations from this claim Schwab meets these limitations in his invention. Timing is analyzed by Schwab, at col. 3 lines 49-51 where timing is recoded before the inserting step and at the end of the trailing sequence. Schwab determines where to insert the sequence code, therefore the time is known of insertion at beginning and at end.

Applicant further argue on pages 12-13 stating:

> "In addition, Applicant challenges the Official Notice and respectfully requests that the Examiner provide a reference for the allegedly well known features. For example, Examiner acknowledges that Schwab relates to outputting a video signal, which is analog and not digital (claim 20, col. 6, lines 61 to 68). In other words, Schwab fails to disclose or suggest digital data. The Examiner, however, alleges that it would be obvious to use the same principles in a digital

> environment as in the analog environment of Schwab (see pages 2 and 3 of the Office Action). Applicant respectfully submits that this position amounts to a mere speculation not substantiated with any evidence of record. Although video data may be stored in analog format and in a digital format, it does not follow that the same principles will be applied to protecting different formats of video data...Accordingly, Applicant respectfully requests the Examiner to withdraw this Official Notice or to substantiate it with objective evidence i.e., a reference."

The examiner disagrees.

The claim states embedding digital watermark in said contents. Schwab discloses "video signal encoded by inserting leading and trailing code sequences into it before the signal is recorded on video tape' at col. 3 lines 49-51. Applicant's attention is invited to Figure 3 of Schwab where the code is illustrated from LSB to MSB. This code is a digital code. The previous examiner had taken the official notice and this rejection stands still because the reference of Schwab reads on the limitations of the present invention.

Applicant also points out that Schwab does not include code sequence as digital watermark.

> "Each code sequence in Schwab will distort the video information in the particular line in which the sequence is inserted. The distortion appears as a dropout (col. 4, lines 45 to 50) as is common with protection of analog data. That is, the digital code sequences of Schwab do not and cannot suggest a watermark at least because they visually affect the contents of the video signal. In short, the digital code sequence is visible during the viewing of the analog video. For at least these additional exemplary reasons, claim 29 is patentable over Schwab in view of allegedly well know art."

The examiner disagrees.

Please note at col. 2 lines 32-35 it is disclosed that the distortion will be difficult for the viewer to perceive.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab et al. (USPN 5,134,496) and well known prior art.

Regarding claims 1, 9, and 17 (claim 1 will be referred to in its representative capacity):

Schwab discloses the following limitations: determining a timing before an end timing of said contents (see Schwab Fig. 2 and corresponding description: The reference shows an end timing position (i.e. the end of the video signal) and the reference further shows determining a timing position before that end timing position (i.e. the end of the trailing sequence...shown as line 227).), setting an end timing of said embedded digital watermark in said contents at said determined timing (see Schwab Fig 2: As was mentioned above, the spot that was "determined" is the spot that is used to insert the trailing watermark.).

Schwab fails to expressly disclose that the digital watermark is inserted into digital contents. Rather, Schwab is directed to inserting this digital code sequence into an analog signal. However, it would have been obvious to use these same principles in a digital video environment rather than an analog environment. Schwab discloses using a medium such as video tape (see col. 3 line 51). It is well known in the art (official notice) to use digital mediums to store and then display video signals. Thus, Schwab's principles apply with equal force in the digital environment.

Regarding claims 5, 13, and 21 (claim 5 will be referred to in its representative capacity):

The scope of **claim 5 is** substantially similar to that of claim 1. The only difference between claim 5 and claim 1 is that--in claim 5--the "determined position" corresponds to a position before a position where previous contents are switched to current contents. Schwab discloses this limitation because Fig. 2 (as described in col. 4 from lines 37 on) shows the encoding (embedding) of a watermark into a field: This process is repeated for future fields-- which, when read, qualify as current contents making the previous field qualify as previous contents.).

Regarding claims 3, 11, and 19 (claim 3 will be referred to in its representative capacity):

The scope of **claim 3** is substantially similar to that of claim 5. The only difference between claim 5 and claim 3 appears to be that claim 3 calls for the embedding to be performed in previous contents, whereas claim 5 called for it to be performed in current contents. In light of the Schwab disclosure, this distinction is not significant. Schwab discloses embedding the watermark in multiple fields. Thus, for every "current content," there is a "previous content" which was embedded with watermark information.

Regarding **claim 28**, the digital aspect of this claim has already been addressed above.

Regarding **claim 29**, the digital code sequence is not visible to the viewer. It appears as a dropout and is therefore not visible as a watermark to the viewer.

Regarding **Claims 2, 4, 7, 10, 12, 15, 18, 20, and 23** Schwab does not disclose any delay time in reading the watermark. This makes sense, because the watermark is a "dropout", and is therefore read in real time with the reading of the video. It follows that difference between the set end timing position of the digital watermark and the end timing of the contents is greater than this delay.

Regarding **claims 8 and 16**, Schwab discloses embedding information that indicates that copying is prohibited (Schwab col. 5 lines 16-20 (and elsewhere throughout the specification).).

5. Claims 6, 14, 22, 25, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab et al. (as was applied above) and further in view of Yoshiura et al. (EP 1 006 722 A2).

The arguments as to the relevance of Schwab et al. as applied above are incorporated herein.

Regarding **claims 6, 14, and 22** Schwab does not disclose the "one copy" watermark, and therefore does not disclose all of the limitation of these claims. Yoshiura, on the other hand, discloses a "copy once" watermark, and further discloses that after the contents containing the "copy once" watermark are copied once, that a "no more copy" (NMC) watermark is embedded in a "start timing" of the next set of contents. Yoshiura discloses this, e.g., at paragraphs [0070]-[0074] (The reference describes embedding the PN sequence into the picture PI--which is obviously at the start timing of the

new contents). It would have been obvious to one reasonably skilled in the art at the time of the invention to modify Schwab's copy prohibition method by adding a "copy once" feature as taught by Yoshiura. Such a modification would have allowed for customers to make a back-up copy of media that they had purchases. This is a beneficial system in that it remains consumer-friendly while preventing widespread piracy of the purchases content.

Regarding **claims 25-27**, Schwab does not disclose that the watermark is a pseudorandom noise generated watermark. However, Yoshiura does disclose this limitation throughout the specification (see, e.g., paragraph [0030] or paragraph [0075]). It would have been obvious to one reasonably skilled in the art at the time of the invention to modify Schwab's watermark insertion method by using a pseudorandom process as taught by Yoshiura. Such a modification would have allowed for a method of inserting/embedding a watermark that didn't deteriorate the quality of the image (see Yoshiura paragraph [0030]).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D. Patel whose telephone number is 571-272-7396. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shefali D Patel
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sdp

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